

What I claim is:

1. A method of lacing a generally toroidal coil provided with slots in an electric machine, by means of an apparatus comprising:
 - a support for said coil, capable of angularly rotating the coil;
 - 5 - a needle having an open eye, said needle having an axis and being rotatable about its axis and being radially and axially movable relative to said toroidal coil to enter and leave a region defined inside a perimeter of said coil;
 - a feeder for a lacing cord,
 - 10 said method being characterized in that it causes a wrapping of the lacing cord around the needle while the latter is radially moving, before the needle leaves the region defined inside the perimeter of said coil.
2. A method as claimed in claim 1, characterized by the steps
15 of:
 - positioning said feeder relative to said needle so that a feeder axis is parallel with the needle axis;
 - rotating said feeder about the axis of said needle with an average angular speed that is twice an average angular speed of rotation
20 of the needle about its axis;
 - depositing the cord onto the needle in correspondence of the needle's eye, near the end of a radial stroke of the needle towards the center of the toroidal coil.
3. A method as claimed in claim 2, characterized in that said
25 angular speed of the feeder and said angular speed of rotation of the needle about its axis are constant.
4. A method as claimed in claim 2 or 3, characterized in that said wrapping of the cord onto the needle is carried out during a feeder rotation by 360° and a needle rotation by 180°.
- 30 5. A method as claimed in claim 2, characterized in that it comprises the further steps of:
 - performing a tying knot;

- hooking the cord at the cycle end;
- automatically positioning the cord end into the needle's eye and cutting the cord.

6. A method as claimed in claim 1, characterized in that said
5 coil is a stator coil in a brushless electric motor.

7. Apparatus for lacing a generally toroidal coil provided with slots, comprising:

- a support for said coil, capable of angularly rotating the coil;
 - a needle having an open eye, said needle having an axis and
10 being rotatable about its axis and being radially and axially movable relative to said toroidal coil to enter and leave the region defined inside a perimeter of said coil;
 - a feeder for a lacing cord,
- characterized in that it comprises an eccentric control assembly
15 capable of displacing said feeder about the axis of said needle at a speed twice a rotation speed of the needle about its axis.

8. An apparatus as claimed in claim 7, characterized in that said eccentric control assembly comprises two plates slidable in vertical and horizontal direction, respectively.